

AUGUST 1945

Grain

Port Arthur Blast Kills 20, Injures 37



Photo by J. A. Smith, Fort William Times-Journal.

THE NEWSPAPERS of the world gave a great deal of space to all the facts revealed about the atomic bomb. Even knowing as little as most newspapers do about dust explosions, in far off Alexandria, Egypt, detailed press stories were published about the disastrous dust explosion unfortunately suffered by the large, well-built Saskatchewan Pool No. 5 terminal in Port Arthur, Ontario, on August 7th, which rocked the twin ports of Fort William and Port Arthur, SOGES convention cities in 1937.

Perhaps one of the most disastrous explosions, surpassing the Western Maryland in Baltimore and the Northwestern in Chicago in the minds of many, this well-managed property was loading screenings into a boat at the time. Needless to say, the damage done plus the fact that the men who might have been able to give some clue as to the cause of the terrific blast were killed—the cause of and place of origin of which are both under question. As many theories are advanced as there are folks to project them. The destruction was so complete

that it is difficult to obtain any definite conclusion as to just what did happen.

The 180 foot-200,000 bushel work-house was of reinforced concrete frame, with brick panels and small windows. This type of solid construction was deemed desirable at the time this plant was built. The elevator proper was a comparatively small head-house directly connected with a group of concrete tanks on the east. This (No. 1) tank group was four tanks wide with the two center tanks at the east end partially cut away to provide loading space for two belts. These belts extended about 150 feet across the tracks and the roof of an office building for boat loading, and were enclosed in the usual type of steel gallery. Loading of these belts was done from bins, which in reality were the upper half of these two tanks, according to details supplied by Charles E. Harbin, Manager of the Underwriters Grain Association, Chicago, who investigated the damage.

South of this group was the Saskatchewan No. 4 Elevator and tank

group of approximately 7,000,000 bushels capacity. This consisted of a larger head-house and three tank units. About 30 feet of space was allowed between the No. 4 and the No. 5 units.

Dust Collection System Shut Off

THE EXPLOSION completely wrecked the elevator and the No. 1 tank group. At that time all of the legs and the conveyor belts were running, for in addition to loading screenings on a boat, cars were also being unloaded. In the handling of these screenings the dust collecting system was shut off so that there was not the benefit of the usual dust control equipment, "which," Mr. Harbin reports, "I was told was inadequate in this house at any rate. You can easily picture the dusty condition that existed."

The explosion occurred at 10:34 (EWT) o'clock in the morning. "Personally," Mr. Harbin continues, "I cannot help but feel that the point of origin was in the elevator basement." The brick paneling on the work floor and up above was entirely blown out. The concrete supporting members were badly damaged, the brick and concrete car loading shed was completely demolished, and the connecting tanks were damaged beyond repair.

While the tracks for the No. 5 house were on the west side of the elevator, and those for the No. 4 house were directly east of the tank group, both sets of tracks were on filled ground. This meant that the basement of the elevator and tanks was above ground between the two sections. The foundation for the tank group was a sixteen inch reinforced concrete wall—which

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Dean M. Clark

New York Representative, K. C. Pratt, Inc., 50 East 42nd Street, New York 17, N. Y. Phone MUrray Hill 2-3730.

was opened up by the explosion like a gate that was hinged at the elevator end. The entire concrete wall was ripped from its place and laid back with that at the far end, resting against the No. 4 tank group some 30 feet away. "This indicated to me that the force of the explosion was much greater at the outside (east) end of the tank group than at the point nearest to the elevator," Mr. Harbin revealed. "In concluding that the explosion originated in the basement, I assumed that it went up the elevator and out under the tanks practically simultaneously, as it was agreed that the two explosions heard occurred almost at the same instant. In fact, some witnesses claimed there was only one blast.

Many Peculiarities Resulted

"THERE WERE the usual peculiarities of explosions in connection with this holocaust, and the devastating damage done brought forth very forcibly the tremendous hazards. The section at the east end of the tank group which was cut away for the belt loading equipment was entirely blown out, with the concrete being blown about 50 feet across the tracks with such force that it completely demolished two rows of freight cars which were on track at this point. The fact that the cars were there protected the office building, which would undoubtedly have been wrecked had the concrete been driven directly into it," Mr. Harbin observed.

"As we all know, Lake-Head Supers have long felt that they were immune from the dust explosion hazards, so this disaster has been a severe and rude awakening for them, just as

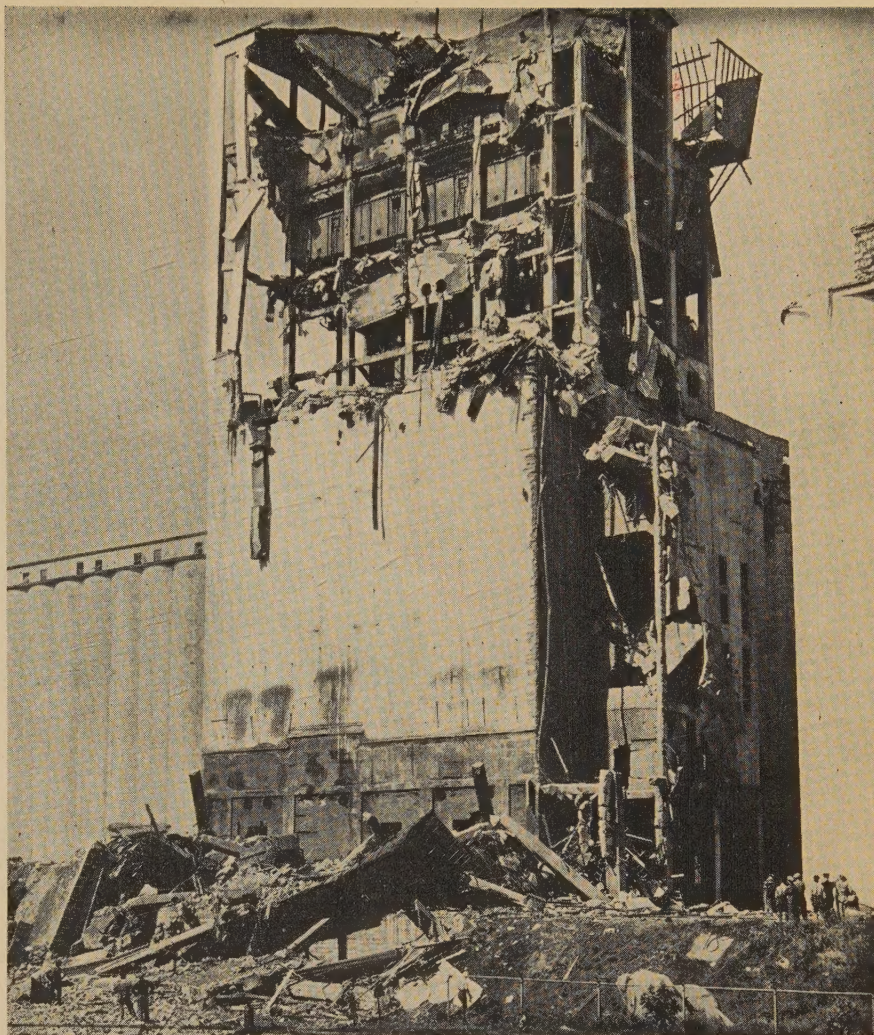


Photo by J. A. Smith, Fort William Times-Journal.

it was for the Duluth-Superior Supers, many of whom felt the same way until they had an explosion or two. It does, however, tragically prove the point which Hylton Brown has so often made, i.e., that dust is explosive no matter where it may be found," Mr. Harbin emphasizes.

Four of the sixteen bodies recovered from the ruins were found 200 feet from the elevator, although four more have still not been accounted for. Some 37 were reported sent to the hospital with varying degrees of burns and injuries. Seventy men were employed in the plant, including a number of soldiers on leave, some of whom were trapped in the interior of the workhouse without a chance to escape. Their situation was not eased whatsoever by the 300 foot long sheets of fire that swept from the plant.

A modern dust collection system installation was planned just as soon as men and materials were available, according to Percy McCallum, General Superintendent of the several Saskatchewan Pool properties. A loft-er leg 175 feet up on Pool No. 5 was

being installed at the time of the blast, and all three of the men working thereon were also killed.

Hubert McCallum, Percy's son, was in the foreman's office, but he counts himself lucky to have been flung out of the building onto a pile of debris.

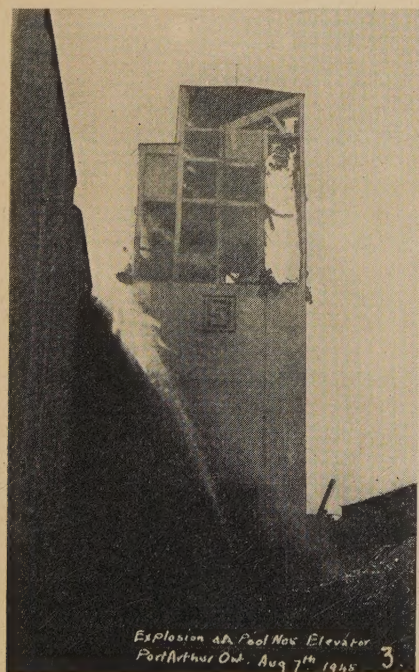
The elevator, exclusive of the 2,000,000 bushels of grain the house could hold, was valued at \$1,750,000. Plant damage is quoted by one authority at better than \$1,000,000.

RECORD MOVEMENT FROM FORT WILLIAM-PORT ARTHUR

A record 242,872,000 bu. grain was moved from the head of the lakes to eastern destinations up to Aug. 1, an increase of 25 million over the amount carried last year.

NO BOATS FOR CHURCHILL

The British ministry of transport has declined to furnish any boats for the movement of any part of the 2,000,000 bu. wheat stored in the government elevator at Churchill on Hudson Bay.



Explosion at Pool No. 5 Elevator
Port Arthur Ont. Aug 7th 1945 3



THE WAY THEY'RE
BREAKING OUT
•• ***LOOKS LIKE AN***
Epidemic!

We are referring to dust explosions. Ever see the like of it? So many really *bad* ones. Of course, they are not "catching" but you can never tell when one will catch up with you.

So why not play safe with Robertson Safety Ventilators and eliminate the unnecessary risk that lays you wide open to disaster? Mounted on your elevator legs, Robertson Safety Ventilators continuously vent dangerous fine dust with automatic gravity action. *Should* a primary blast develop it is immediately ushered outside through the Robertson Vent, thus preventing spread of secondary explosions.

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NEW N.F.P.A. VENTING CODE FOR PREVENTING EXPLOSION DAMAGE

After Several Years of Intensive Study, the N.F.P.A. Committee on Explosion Venting, of Which Authority Hylton R. Brown Is Chairman, Issues This Initial Guide for Minimizing Devastating Damage in the Unpredictable Event of a Dust Explosion. The Salient Features Are Given Here.

THE Explosion Venting Committee presents this initial progress report containing some of the information that the members have collected on the possibility of releasing without serious damage the pressure produced by dust, vapor or gas explosions in industrial equipment or plants. The members feel that it will be necessary to conduct both laboratory and large scale tests, and do further research work on the interpretation of test data before working standards can be drafted, as there is almost a complete lack of technical data presently available.

Some of the necessary information will probably be made available through research work now being conducted by the Bureau of Mines, but it has been suggested that the need for a working standard on explosion venting be called to the attention of the Board of Directors of the N.F.P.A. and an invitation be extended to industrial organizations to co-operate actively in the research program.

Description of Vents and Vent Closures

PRELIMINARY experiments indicate no appreciable difference in the efficacy of vents due to the shape of the vent opening. Round, square or rectangular openings may be used. The following descriptions of different types of vents or vent closures available or in use will aid in the selection of equipment best adapted to provide the desired protection.

Roof or Wall Openings—Unless it is necessary to maintain special temperatures in a room or building for satisfactory operation or comfort of employees, processes with inherent explosion hazards should be conducted in areas with walls arranged as doors which can be opened wide during operation. If partial enclosure is necessary to prevent intrusion, the walls may consist entirely of louvers,

and roof openings protected by weather hoods may be provided. This is the simplest method of providing for the venting of explosion pressure to prevent structural damage.

Ventilated Sash—The most generally used standard type of building or room vent consists of window sash, hinged or pivoted to swing outward under predetermined pressure from within. Several commercial types of explosion venting sash are on the market and this form of protection has been found effective in a number of cases. It is necessary to have such sash equipped with some form of latch or friction device to prevent undesired opening due to normal wind action. This is particularly true in exposed, elevated, or waterfront locations. It is also necessary in certain installations to guard against intrusion by using latches that cannot be opened easily from the outside. Care should be taken to avoid the use of any latch or lock which is not always ready to operate if an explosion occurs. Both sash and hardware should

be approved explosion venting types. [Example: the Canavan Explosion-Venting Sash.]

Fixed Sash—In some cases where ventilated sash is not suitable it may be desirable to install fixed sash with only light wall anchorages. The explosion pressure breaks the light fastenings and blows out the entire sash which is sacrificed to save the building.

Scored Glass—Experiments have shown that scoring glass on the outside with a diamond or steel wheel cutter greatly reduces its strength or resistance to explosion pressure from within. Best results are obtained when the X is cut with the lines starting about two inches from each corner and with a two-inch gap at the center to prevent vibration cracking. Fixed sash with scored glass is generally used when it is desirable to provide protection for an air-conditioned room or when hinged sash are not adequate. Attention is called to the healing action which occurs after prolonged exposure and permits the scored glass to regain a part of its original strength.

Light Wall Panels—This type of protection is similar to that provided by fixed sash. An exterior wall between strong partition walls and a strong floor and ceiling is designed to blow out readily if an explosion occurs. These walls or panels may be of very light construction such as building or roofing paper on large mesh chicken wire. If heavier construction is used some protection against flying material should be provided for any persons or buildings in direct proximity.

Monitors or Skylights—On the top floor of buildings, or in one story structures, protection against explosion pressure can sometimes be provided by installing monitors or skylights. Sash or panel venting areas can be supplemented in this way. The



effectiveness of monitors and skylights as vents is frequently limited by the necessity of using wired glass and sufficiently strong construction to provide protection against the elements and attempts at unauthorized entry. Grids may be used to prevent entry through skylight openings and counterbalances can sometimes be used to offset the effect of heavy construction. In some climates it is necessary to consider snow loads. Resistance to displacement or opening of skylights or monitor windows by explosion pressure should be as low as consistent with the requirements of structural strength and special in-

spections should be made when snow and ice conditions could affect the operation of the vent.

Poppet Type Vent Closures—Devices of this kind are generally used to provide explosion pressure protection on tanks or equipment which must normally be kept closed to prevent the escape of dust, vapor or gas. They consist usually of plates or doors equipped with gaskets and held in the closed position by spring action. As a rule resistance to opening in such devices increases as the spring compression increases and for explosion protection it is preferable to have a trigger action on the spring

which will permit the door or plate to open wide if unusually high pressure occurs.

Combination Ventilators and Vents—This type of equipment is usually a proprietary device developed to serve some particular purpose and normally provides for a certain amount of ventilation or a certain number of air changes for a given enclosure. When there is an unusual flow of air, or some high pressure occurs, the device opens to provide an unobstructed passage to the outside of the building. Devices of this kind are particularly well adapted for use on equipment in which there is a reversal of air flow into or out of an enclosure or equipment such as elevator legs, garner bins and scale hoppers. The venting portion of such devices should swing open readily to provide an unobstructed opening of the size necessary to release without damage the pressure produced by an explosion in the equipment or enclosure it is designed to protect. [Example: The Robertson Explosion Ventilator.]

Required Venting Areas

THE size of the opening or vent required to release explosion pressure without structural damage has a definite relationship to the volume of the enclosure to be protected. This ratio of vent area to volume is dependent on the type of explosion to be vented, the shape and strength of the structure or equipment which contains the explosive dust, vapor or gas, and the location and type of vent used.

Grain Dusts—Explosions of this type of material which produce a comparatively low maximum pressure and rate of pressure rise have been satisfactorily vented through openings provided in the ratio of 1 square foot for each 80 cubic feet of volume in a small cubical shaped room. Under such conditions pressure on walls or roof did not exceed 300 pounds per square foot.

Starch—Material such as starch, which is classed as one of the most explosive of the carbonaceous dust group, has been satisfactorily vented through openings provided in the ratio of 1 square foot for each 5 cubic feet of volume. Under such conditions the pressure on walls and roof did not exceed 300 pounds per square foot.

Location and Spacing of Vents

MANY of the experiments which have been made to determine the possibility of using vents effectively to prevent explosion damage



The Cost is SMALL compared with the PROTECTION You Get—

IT IS well known that the explosive power of grain dust is many times that of dynamite. In comparison with the loss of property and possibly life, often caused by dust explosions, the cost of dust control installations is very small indeed.

DAY DUAL-CLONE DUST COLLECTORS

Now available in BOLTED FLANGE construction, shown below, prefabricated and riveted at the factory, ready to assemble and bolt together at the flanges. Packs compactly for shipment, easier to handle, simplifies inside installations, especially of larger sizes. This patented DAY development—with its low resistance and high separating efficiency—is the key to the uniformly successful operation of DAY DUST CONTROL Systems.

DAY Service SAVES You MONEY

Profit by DAY'S over 64 years' experience. DAY facilities include CORRECT engineering, fabrication and installation of entire system—including pipings, fittings, dust tanks, pneumatic dust and material car loaders, track shed dust suppressors, and all other sheet metal work of standard or special nature—big or small.

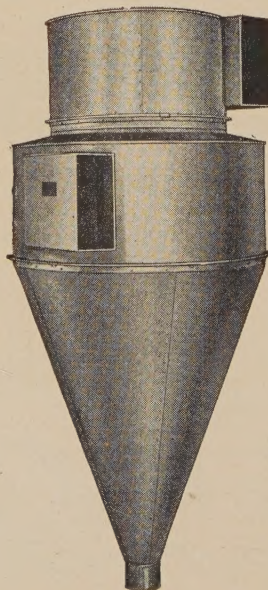
Write us about your needs.

THE DAY COMPANY

816 Third Ave. N. E., Minneapolis 13, Minn.

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Above is a good example of proper basement window ventilation protection provided through the correct ratio of windows to cubical area within, pictured at Corn Products Refining Co.'s Argo plant.

have been conducted in cubical shaped structures. Enough information is available to indicate that the results of such tests are not directly applicable to long rooms, deep tanks and bins, tunnels, galleries, ducts, odd-shaped enclosures; certain basement areas of great horizontal dimensions and low ceiling heights, or rooms containing large machines which may partially obstruct or block the venting area.

Recommendations for venting explosion pressure from ordinary rooms or buildings of light or medium construction generally specify that in no case should any point in the enclosure be more distant from a vent than 1.1 times the least horizontal dimension of the room. This provision permits the use of windows as vents when they are installed in a square room several feet above the floor level and are not blocked by large machines or other occupancies.

Except in those cases where sufficient data are available on venting requirements for other than cubical shaped rooms it is recommended that vents be provided if possible for each

cubical section of the odd-shaped enclosure.

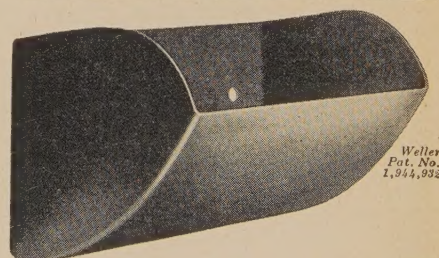
Long rooms can be protected in accordance with the above recommendation by installing windows or other vent openings in one of the long side walls.

Storage tanks or bins must be vented through the top or upper portion of the side walls and this fact limits the possible venting area. To insure the effective venting of bins or tanks of ordinary construction it is necessary to limit the height to twice the diameter or least cross-sectional dimension. Higher tanks or bins should be constructed to resist greater internal pressure.

Tunnels, galleries and ducts usually present the most difficult venting problems. If practicable, tunnels and galleries should be provided with a vent of the required area in each cubical section. Ducts, if constructed to resist explosion pressure, can usually be vented satisfactorily by installing diaphragms or other release devices at intervals of about 20 diameters or 20 times the least cross-sectional

dimension. All dead ends of main ducts or branches must have vents equal to the full cross-sectional area of the duct.

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Compare results! Check increase in capacity. Count saving of time, labor, cash. Do *that* and it's "dollars to doughnuts" you'll replace *all* old style buckets with the elevator bucket that has the Logarithmic Curve. From Form 35 you can learn how *much* increased capacity may be obtained. Send for it.

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327 S. La Salle St.

Chicago 4, Ill.

Odd-shaped enclosures which may be in the form of an L or T or some unusual figure can usually be vented in accordance with the general recommendation by dividing them theoretically into cubical units and providing a vent for each section.

Extremely large rooms or basement areas can sometimes be divided or partitioned to form smaller units which can be more effectively vented. Skylights and flues or wells extending above the roof level may also be used to release pressure from rooms in which the wall area is not sufficient for the installation of the required number of vents or the occupancy prevents effective use of side wall

Defense Savings Bonds and Stamps

HELP Uncle Sam out once more by buying Defense Savings Bonds and Stamps! On top of being a good investment, it's patriotic. Your postoffice can sell you bonds or stamps in denominations from 25c to \$10.00.

vents. [Some open up a tank permanently.]

To obtain the desired protection it will of course be necessary in all cases to construct the building or equipment sufficiently strong to resist the pressure produced under the recommended method of venting or provide additional vents. Vents provided in a ratio of area to volume which will permit building up pressure in the enclosure to 700 pounds per square foot cannot be expected to provide protection for construction which will stand only 200 pounds per square foot.

Ease and Speed of Operation

WHERE unobstructed openings cannot be provided to serve as vents the closure should be designed, constructed and installed to operate as quickly as possible and with minimum resistance or inertia.

Except where it is necessary to adopt a higher operating pressure because of wind action in exposed locations or because of some operating pressure in equipment, vents should be designed to operate at not more than 40 pounds per square foot.

Inspection, checking and special maintenance are necessary to keep vents in effective operating condition. Attention is called to the danger of freezing in cold weather. High humidities inside or water dripping on the outside may be responsible for this condition at many exterior wall vents. Provision should be made to grease or treat all vent edges to prevent them from becoming wet or frozen.

Remote Control of Vent Closures

IN some cases it is possible to arrange for the opening of vents through remote control. Heat or pressure actuated devices designed to detect sudden rises in temperature or pressure can be employed to close doors, open vents and perform other operations. The time required for such operations is from one to two seconds which means that in the present state of development they can only be used effectively for the opening of vents located at a considerable distance from the origin of the explosion because of the high rate of flame propagation in such dust or gas ignitions.

Use of Vents to Prevent Explosion Development

ALTHOUGH vents have not been generally used to prevent or control explosions, experience has shown that vents which release explosion pressure before it ruptures partition or division walls are frequently effective.

WILLIAMSON FEED MILLS
QUALITY FEED MANUFACTURERS
OFFICE AND MILL
CORNER LOGAN AND WILCOX STS
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July 19, 1945

Eriez Manufacturing Co.
Erie, Pennsylvania

ATTENTION: Mr. R. F. Merwin

Dear Mr. Merwin:

It is indeed a pleasure for us to write you regarding the highly satisfactory performance of your ERIEZ magnet.

We ordered this magnet by air mail express and Mr. Zumstein made a special trip enabling us to have it working within twenty-four hours after the order was placed. This magnet was installed on a molasses mixing unit at an almost perpendicular angle from the discharging spout.

Since its installation three months ago, we have taken out over seven, sixteen quart baskets full of tramp iron and a large portion of this is fine and small pieces of metal that do the greatest damage to livestock. Prior to installing your magnet we were having a great many complaints from our customers regarding tramp iron and metal, but since installing your magnet we have had not one single complaint.

In addition to the remarkable performance of your magnet we would like to add that the cost of installing is so simple and easy that we did not have to spend one penny for hooking it up. Likewise, there is no operating cost.

Very truly yours,

WILLIAMSON FEED MILLS

B. H. Williamson

BHW:slw

ERIEZ MANUFACTURING COMPANY

119 East 12th Street • Erie, Pennsylvania

tive in preventing the spread or development of an explosion.

It has also been demonstrated in explosion tests that release of pressure from an incipient dust explosion near the point of origin will retard and may prevent further development of the explosion.

After an explosion has partially developed it is possible to change its course through the arrangement of vents. Opening of a vent ahead of the flame wave of an explosion has a tendency to accelerate travel toward the opening, while opening of a vent behind the flame wave may retard its speed.

*[Bracketed data ours.]

INTELLIGENTLY SPEAKING

You would not abolish a Fire Department because there were no fires recently.

You would not discharge the Police Department because of no trouble lately.

You would not scrap the required Army and Navy because of no immediate war in sight.

Well, then don't neglect or make the Safety Committee inactive because the accident record is good!

If your accident record is good, thanks to your Safety Committee, or if the accident record is bad, investigate the Safety Committee. Correct any shortcomings or lack of proper activity.

An industrial plant is no safer than the foremen and the Safety Committee.—H. W. Puetz, Safety Engineer, Milwaukee.

EASY COLOR DYNAMICS

Experiments carried on by the Thompson Aircraft Products Company of Cleveland showed that bright and light colors in the plant lifted workers' morale and increased their output, and so the company is now repainting its 2,000 machines. The bases of the machines will be painted green, with the upper portions in buff and moving parts in red. Coral will be used on danger points to assure high visibility, and general harmony of color is to be worked out for walls, traffic zone marks, etc.

Helpful information on the use of color in industrial plants can be secured from the Arco Company, Cleveland, which has published a guide to color selection for industrial use; the Sherwin-Williams Company, Cleveland, which has issued a list of seventeen proposed industrial color harmonies; the Pittsburgh (Pa.) Plate Glass Company, and E. I. du Pont de Nemours and Company, Wilmington.

To repeat our statement in
the June Issue of Grain:

"YES,

**We have the EXPERT MECHANICS,
GUARANTEED MATERIALS, and QUALI-
FIED EXPERIENCE so necessary to turn
out a First Class Concrete Restoration
and Waterproofing Job."**

Let us make a Survey of your Plant without
any Cost or Obligation.

THE H. J. MELLEN COMPANY

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Chicago 4, Illinois

Experts in Restoration, Water and
Weatherproofing of Concrete Grain Stor-
age Tanks and Brick Mill Buildings.

AND WE CAN DO YOUR JOB

NOW

Dynamic Kernels – The Lord's Wheat



"Verily, verily, I say unto you, except a corn of wheat fall into the ground and die, it abideth alone; but if it die it bringeth forth much fruit." (John 12:24). The young student pastor in the Friends Church at Tecumseh (Mich.), further exhorted his congregation to prove the principle of Malachi 3:10, to grow wheat and to tithe it. For six years this should be repeated as directed in Leviticus 25:3, 4, he reminded. That was late in September of five years ago.

Perry Hayden, proprietor of the 110 year old Hayden Flour Mills, was much moved. The more he thought of the idea the more inspired he became to apply the triple biblical scripture. And so he did.

Following the biblical instructions he sowed one cubic inch (360 kernels) of Baldrock, soft winter type wheat, the first year, and each year

thereafter he has tithed his Quaker church one-tenth of the harvest. That first cubic inch, worth \$0.00002, only required 32 sq. ft. of ground, but the harvest the next year had grown fifty fold. Being small in size and value (14c), the 1941 tithe (1/10th of 50 cu. inches) "entered the ministry" via the minister's mouth.

The next year's crop, less the tithe, required 1440 sq. ft., produced 1 1/6th bushels and was worth \$2.67. Cookies were made with the tithe. The 1942 "Lord's Wheat" produced 16 bushels from one acre. The 1943 "Dynamic Kernels," less the tithe, required 14 acres and the harvest in 1944 totaled 370 bushels. These two tithes were sold and the money donated to the Cleveland (O.) Bible College.

The fifth harvest, completed July 25, 1945, totaled 4,868 bushels from 230 acres and was valued at \$7,552.00, with a yield of 21.7 bushels per acre, as compared with the 18 to 20 previously. The average was 21.2.

The project attracted the attention of Henry Ford. It was he who furnished the land for this past crop, to say nothing of the 40 combines to harvest it. In addition to encouraging the project, Mr. Ford has personally taken an active part in it. (See illustration.) A small plot of wheat in the Tecumseh Friends Church yard was harvested, as the accompanying illustration depicts, with a grange for the benefit of the thousands who had gathered for the occasion.

The proceeds from the tithe will be given to the Tecumseh Hospital. The remainder will be sold to 4-H Club members in Lenawee County, Michigan, where the farm youths will, in turn, tithe their anticipated 100,000 bushel harvests to their respective churches, plus a 5% tithe to the non-profit Dynamic Kernels Foundation, founded by Mr. and Mrs. Hayden, which will be used for the 4-H Clubs. Mr. Ford has erected a model old-time mill as a token of his interest in the program.

Even though the land were not permitted to lay fallow in the seventh year, as per the scriptural precept, there would not be enough land in

HIGH CAPACITY GRAIN CLEANING EQUIPMENT for TERMINAL ELEVATORS!



NEW PRIORITY-RATED
EQUIPMENT AVAILABLE
FOR ESSENTIAL NEEDS

Hart-Carter normally offers a complete line of special, heavy-duty cleaners for terminal elevators. Included are the 2564 Carter Disc-Cylinder Separator, combining discs and cylinders; and the all-cylinder 45 Hart Uni-flow Grain Separator. These machines offer a profitable answer to whatever cleaning, grading, separating or processing jobs you may be called on to handle.

HART-CARTER COMPANY

670 Nineteenth Ave. N.E.

Minneapolis, Minn.



the whole world to carry forward this "Lord's Wheat" program on the same scale for another six years, the Millers' National Federation has figured out.

WHEAT FLOODING GROUND

Mountains of wheat in various sections of Kansas and Colorado are reported to be piling up on the ground, due to the shortage of ample box-cars to move same to market. Kit Carson county, Colorado, once a part of the "Dust Bowl," has one city block in Burlington piled high with 100,000 bu. wheat, due to record yields. Nebraska yields are likewise high.

CANADIAN GRAIN TO INDIA

Some 16,000,000 bu. wheat in Vancouver and New Westminster terminals will be shipped to Indian and European countries from the Pacific coast at the rate of 80,000 tons monthly.

WHEAT TO FRANCE

Approximately 12 million bu. of wheat a month is to be imported by the French Food Minister Christian Pineau commencing immediately. The U. S. and Canada will supply the grain.

More people were killed at home by burns than those killed in all railroad accidents last year.

PROTEIN CONTENT DOWN

Protein content of this year's crop of soft winter wheat in the central states is sharply lower than for several years past; and for the second successive season the hard winter wheat crop of the Southwest is well below normal in its protein content. It is also possible that these conditions will be found to prevail in other important wheat producing areas.—Millers' National Federation.

It is the wise head that makes the still tongue.—W. J. Lucas.

DISTILLERS GIVEN MORE GRAIN

Distillers may use 3,000,000 bu. of grain other than corn and grain sorghums for the production of beverage spirits and by-product livestock feed during each of the months of September through December, the USDA just announces. This is an increase of 500,000 bu. over the August allotment as well as a boost over previously announced allotments. New crop corn may be allowed in addition to or in place of other grains in November and December, if the crop permits.



THE *Right* COMBINATION FOR BUCKET EFFICIENCY

1. Scientific Design.
2. Smoother Pick-up.
3. Perfect Discharge.
4. Greater Load Carrying Ability.
5. Back-legging Elimination.
6. Belt Speed and Bucket Spacing Flexibility.



"Nu-Hy" Buckets on your belt give elevator legs up to 100% more capacity—contour construction makes for better bucket spacing and full bucket loads. High sides and high front lips prevent spillage—buckets dip into grain gently—no steam shovel attack to break grain or cause excessive wear on the belt. It will pay you well to get our Capacity Analysis Form No. 76 . . . and our recommendations that follow. There is no obligation for this service.





Pictured is the properties of the V-O Milling Company of Los Angeles, Cal., recently acquired by The Quaker Oats Company of Chicago. Though construction was begun in the depths of the depression period, July, 1933, Max and Arthur Viault were convinced of the bright future of that area, as well as that the depression could not be anything but temporary.

The feed mill and part of the warehouses were built along with the original section of the grain storage tanks, and the firm started its feed business in February of the following year. More equipment was added several years later and 15 flour storage tanks erected to help meet the demand which has kept the properties running at capacity since the beginning.

The same personnel will continue to operate the 20 ton an hour feed plant, the 1,000 bbl. a day flour mill, the 750,000 bu. elevator and the 11,000 ton capacity warehouse, under Western Division Manager M. J. Aubineau and Assistant Manager Paul H. Bimmerman.

THE HOLE IN THE DONUT

Considering the price of bread, USDA finds that while the farmer's share in the sale of all bakery goods was but 6.7c for the grain alone in each dollar's worth of bakery goods, "the small share of the consumer's dollar which is returned to the farmer for such products is occasioned by the amount of processing required, the perishability of the product, and the high cost of distributing the product to the consumer."

Terminal elevators receive only 0.3c of this consumer's dollar, and country elevators 0.5c. While there tends to be an increased spread between producer and consumer, the amount going to individual groups and industries in this distribution tends to lessen.—G&FDNA.

Every age has its problem, by solving which, humanity is helped forward.—H. Heine.

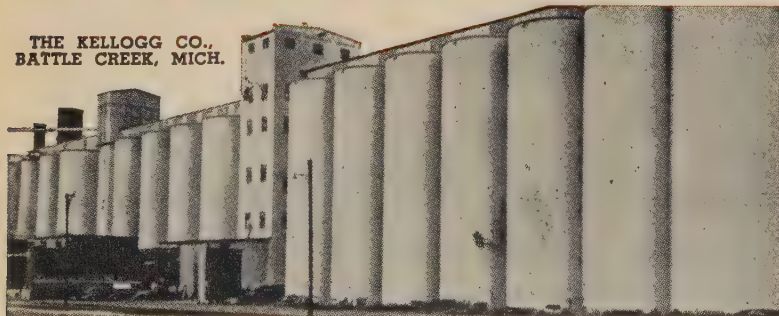
ENDORSES INDUSTRIAL GRAIN ALCOHOL USES

With the interests of grain producers in mind, the directors of the Minneapolis Chamber of Commerce have set in motion a plan to seek a vast new peace-time market for grain, provided it is found that industrial alcohol manufactured from grain can be used as successfully after the war as it has during the war.

Resolutions adopted the Chamber urged the National Grain Trade Council, which body represents all grain exchanges as well as the grain industry of the country, to appoint a representative committee charged with the responsibility of conducting a thorough investigation into the possibilities and practicability of extending the uses of industrial alcohol manufactured from grain. (Our April '45 issue featured interesting details on this subject.)

180,000 Sq. Feet of Surface renewed with GUNITE and SURFACITE!

THE KELLOGG CO.,
BATTLE CREEK, MICH.



All the cracks in this fine-looking elevator were repaired by forcing tough-bonding Gunite into them at a high pressure.

Then the whole structure was thoroughly waterproofed with an extra thick coating of Surfacite.

For a better than new job, write

JOHN D. BOLTON & CO.
20 N. Wacker Drive Chicago

Car Dumpers and Fifty Foot Cars

We hear so much these days about the fifty foot box car that it deserves some comment. Admittedly there is not much to do about these big cars, but most of the Supers are "car dumper minded" and should know what to plan for.

The important fact, known to be true, is that automobiles, furniture, radios and other bulky items of freight for which the fifty foot car was built, have not been manufactured during war time, so the big car has found its way into the grain trade. Naturally shippers are glad to get anything that rolls, despite the inconvenience they cause. With the return of peace time production the big cars will be moving to the manufacturing centers where they will be urgently needed for specialized freight.

In checking with various plants it has been found that fifty foot cars have never averaged more than three percent (3%) of the cars received, even during recent war years, so the problem may be over-rated. Railroad men are reluctant to commit themselves, but such information as can be obtained indicates that the forty foot car will be standard for many years ahead.

The difficulty of changing the centers of multiple shovel pits in hundreds of terminal plants to accommodate a string of three, or even two, consecutive fifty foot cars is prodigious because cross belts, elevators, hopper scales, etc., would have to be changed, too. The railroads have too much ownership in our terminal elevators, even though it is only eleven percent (11%), to begin sanctioning changes of this kind.

The car dumper manufacturers can lengthen their machines if the trade requires it, but they remind us that these extended unloaders will be still more expensive, will require longer and deeper foundations with longer and higher dumper sheds. Time will also be lost in the additional travel of the car clamps along an elongated dumper, both coming up and going down, on the vast majority of standard cars.

In order to handle an occasional fifty foot car should it suddenly arrive at their standard-length dumper, The Quaker Oats Company at Akron

have installed an emergency shovel rig on the car unloader itself where it is ready for instant use. This looks like a good answer for the problem of handling the occasional fifty foot car on the dumper for those fortunate enough to have or to get one.

(Ed.: The Society of Grain Elevator Superintendents at their 1936 convention in Duluth passed resolutions asking the co-operation of the railroads in preventing the use of fifty foot cars in this industry, and were assured of their aid.)

SUGGESTS SLOPING FLOOR FOR BOXCARS AS UNLOADING AID

I hope your prediction of an inexpensive, workable unloading device will soon become a reality. I have a hunch that the conveyor companies can lend valuable help and I do hope that the details of the talk made by Ed Escher of the Screw Conveyor Corp. before the Chicago Superintendents will be published.

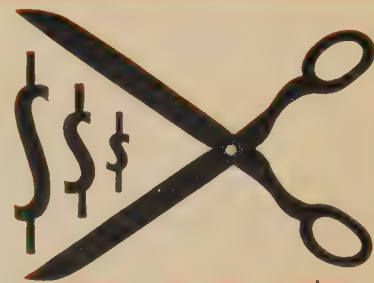
It occurs to me that if somehow or other we could get the railroads to make the floors of their boxcars so that they could be made to slope sidewise that our unloading problem would be pretty well solved. The floor would only have to have a pitch of four inches in height for every foot in width to be sufficient for any grain to run freely from the opposite side of the car.

The floor could be lifted on one side or dropped a very little bit on the other side—whichever would be easiest and most satisfactory. With a husky conveyor a car could be emptied within a very few minutes by two men at the most, including an operator and a sweeper.

Let's hear some more ideas. I know this is not a finished "engineering study" of the situation, but who can tell from where the answer may come?—Bob Hunt, Tacoma, Wn.

SET RECORD LOADING WEEK

A record of weekly grain and grain products loadings for recent years was set during the week of July 21, when American Class 1 railroads loaded 68,552 cars, the largest weekly figure reported since August of 1929.



CUT
YOUR BUILDING
MAINTENANCE COSTS



You C-A-N Escape Expensive Repairs Resulting From Moisture and Frost Damage With P-R-O-V-E-N

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PERMANENT WATERPROOF COATING

Hydrozo may be applied to any dry surface—inside or outside—is not in the least affected by atmospheric conditions. Furthermore, A-N-Y color may be added by your waterproofing contractor, since HYDROZO does N-O-T oxidize.

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Manlift Code to be Drafted; This Ordinance a Model

The grain handling and processing interests of St. Louis have reason to be proud of the ordinance recently passed by that city. Coming at a time when the American Society of Safety Engineers and the American Standards Association are commencing work on a Code For Manlifts, which Code will eventually be adopted by most municipalities as a part of their own, this model ordinance, in the opinion of capable George H. Steel of Ralston-Purina Company, points up the course which all grain handling and processing plants will find it expedient to follow, commencing immediately. Any suggested changes might well be "aired" through "GRAIN" pronto, however. So here it is, in part:

Ordinance 42914

An Ordinance regulating the construction, installation, maintenance and operation of manlifts, providing for the inspection thereof, and the payment of inspection fees.

Be it ordained by the City of St. Louis, as follows:

Section One. Manlifts or manhoists are defined as elevator type devices operating in a vertical position and consisting of an endless belt traveling over fixed pulleys at top and bottom limits of travel, with belt-carrying steps and handholds so arranged that a person may ride in a standing position.

Section Two. Manlifts, and all parts thereof, shall be designed, constructed and erected in such a manner as to provide a factor of safety of not less than six (6). A structure of steel for the support of moving parts shall be provided, and shall be designed and braced so there will be not more than one-quarter of an inch deflection in any direction under normal operation.

(a) All design, fabrication and installation work must be in conformity with good workmanship and general practice.

(b) The manlift driving mechanism and head pulley shall be set on a substantial foundation of steel or concrete. All equipment must be securely fastened at top, bottom and intermediate landings, and in case of landings spaced further apart than sixteen feet, the guide channels, when necessary in the opinion of the Building Commissioner, shall be so braced as to limit deflection.

Section Three. All machinery in connection with manlifts shall be

TO DRAFT MANLIFT CODE

I was just enjoying an evening reading every article in "GRAIN." I was especially interested in the two items on "Manlifts" for it reminded me of something I think should be made known to all members of the SOGES.



While I was attending a previous meeting of the New York Metropolitan Chapter of Safety Engineers I was speaking with Mr. Cyril

Ainsworth, Secretary of the American Standards Association. I asked him if anything more was done with the Safety Code for Conveyors and Conveying Machinery. He said no further action had been taken, but that they (the American Society of Mechanical Engineers) expect to go ahead with this work in the near future.

"However," he said, "we are now getting busy on drafting a standard 'Safety Code for Manlifts,' sponsored by the American Society of Safety Engineers." I thought it would be wise to pass this news along to the members of the Superintendents' Society, especially to those who are planning to build new plants in the near future so they can govern themselves according to the new standard installation.—William F. Schaediger, retired, Corn Products Refining Co., North Bergen, N. J.

guarded in accordance with the requirements of all laws and ordinances regulating safety standards for transmission equipment.

(a) In industrial buildings, to which, in general, the public is not admitted, enclosures of standard guard rail, wire screen, grille or metal, shall be provided around openings at each landing, allowing only sufficient opening for ingress and egress to lift steps, and shall be placed so as to have a landing space of not less than two feet directly in front of opening.

(b) Side guards shall not be more than eight inches from the side of floor opening and shall extend to a point flush with front of floor opening, but in all cases these side guards shall extend to a point not less than six inches past the step clearance; this dimension shall be made at right angles to the manlift belt.

(c) Openings in rails or guards shall be provided with a maze or staggered opening or self-swinging and closing gate or rail opening away from the manlift only.

(d) All guards shall be equipped with toe boards; and in case of a straight through entrance, the outward swinging gate shall come within one inch of the floor landing.

(e) In all buildings to which the public is admitted. . . .

(f) The floor area around the manlift shall be of non-slip type and shall be maintained at all times in a non-slip condition.

(g) At all floor openings on the up side and at all projections within three feet in any direction in or in front of the plane of the belt, there shall be

installed funnel-shaped guards set flush with the opening or projection and extending downward to a depth of not less than two feet. Said funnel guards shall be constructed of metal plate of not less than No. 16 U. S. Standard gauge, and the bottom shall have a smooth rounded edge of not less than one-half inch diameter. The funnel guards shall be set at an angle of not less than sixty degrees (60°) from the horizontal.

Section Four. Each floor shall be provided with openings on both the up and the down side of the manlift not less than thirty inches wide. The sides of the openings shall be semi-circular and the front of the openings parallel to the belt.

(a) The clearance between the front steps and the floor openings shall be a minimum of twelve inches and a maximum of fourteen inches.

Section Five. The speed of manlifts shall not exceed ninety feet per minute.

Section Six. The minimum clearance between the head or top pulley and the roof or other overhead obstruction shall not be less than four feet. [See Section 7 (a)]

(a) The bottom of the manlift shall not extend into a pit of any kind nor below the lowest operating floor.

(b) The entrance to manlifts on the up side shall not be from any floor where the clear ceiling or projection height is less than nine feet.

Section Seven. Persons, while ascending or descending, shall have control of the manlift at all floors and between floors. A manually-operated stopping device shall be installed so that it shall be readily accessible throughout the entire travel of the manlift, and shall be so arranged that the manlift may be stopped when the device is pulled in the direction of the belt travel, and so that the rider shall be able to stop the manlift on either up or down movement, but shall not be able to lock it in any position.

(a) A mechanical-electrical device shall be provided which will automatically shut off the main power supply to the motor and apply an electric brake in the event that the rider fails to alight at the top landing. The manlift shall be so arranged that the belt cannot travel more than two feet in either direction after the automatic stop is thrown and cannot again be started except from above the upper landing. No automatic device for returning the operating circuit shall be permitted.

(b) A photo-electric safety control shall be located on the top operating floor, set to operate when the belt has traveled six inches beyond the point of operation of the mechani-

cal-electrical safety device, and set to act in case of the failure of the mechanical-electrical safety device. The photo-electric safety device shall be connected to the control circuit through the holding coil of the main contactor to the main motor. The starting button for returning the circuit of the photo-electric safety device shall be located out of reach of the rider when standing on the manlift steps. The photo-electric cell must be so shaded that it will receive its light source from the proper predetermined point only.

(c) All electrical equipment shall

conform to the Electric Code of the City of St. Louis.

(d) The brake shall be an electric magnetic spring set type, of proper size, and shall not allow abnormal coasting, and shall be of the renewal shoe type so that when the power is shut off the brake will be applied, and it shall be wired from the main power circuit between the motor and the mechanical-electrical safety control.

Section Eight. The manlift machinery shall be equipped with adequate means to keep the belt at the required tension, and to prevent the belt from slipping on the pulleys.

IT'S STARING YOU IN THE FACE!



WHAT?

**THE ANSWER TO ALL YOUR
GRAIN BELT PROBLEMS!!**

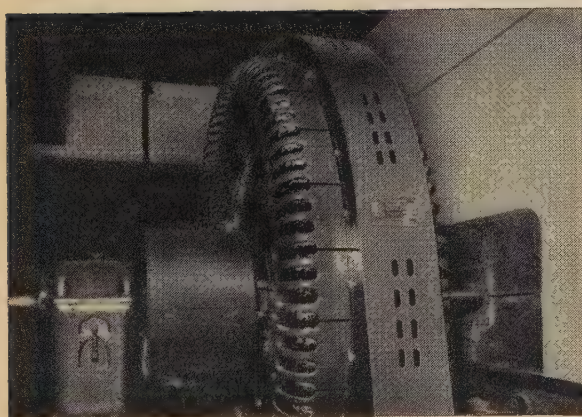
Put **BLACK REXALL BELTING** on your heavy-duty legs and conveyors and **STANDARD REXALL** on bag conveyors . . . then whatever worries you may have, **BELT TROUBLE WILL NOT BE AMONG THEM!**

IMPERIAL BELTING COMPANY

1750 S. Kilbourn

Chicago 23

need more **STARTING** torque?



This 350 hp, 200 rpm Simplex synchronous motor provides high starting and pull-in torque with low starting current. It's simple and accessible—easy to install, maintain and repair. No clutch is needed, yet acceleration of the flour mill lineshaft is smooth and efficient, with less slippage or throwing of belts.

When you start your mill fully loaded does your main drive balk? Then you need a Westinghouse Simplex synchronous motor. Its high starting torque, high power factor and high efficiency are made to order for flour mill service.

In the average mill, two-thirds of the load is friction; it's easy to see why starting torque may be *twice* the normal running torque. The Simplex motor takes this in stride, whether direct-connected to low-speed lineshafting or rev'd down through a Westinghouse speed reducer. Result? You'll get less slippage—less belt throwing—less down time.

But that's not the only way the Simplex motor will cut your production costs. You'll pay less for power—and less for maintenance and repairs. Uninterrupted constant speed operation gives you a more uniform product—and *more of it*. For the complete story, call your nearest Westinghouse representative. Westinghouse Electric & Manufacturing Company, P. O. Box 868, Pittsburgh 30, Pa. J-94664



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Section Nine. The step treads shall be placed on belts at intervals of not less than sixteen feet.

(a) Step treads shall not be less than nine inches deep and twelve inches wide and uniform in size, shall be securely fastened to the belt, and shall be so attached that they will remain at right angles to the belt in ascending and descending.

Section Ten. Handholds with at least nine inches gripping surface and not less than two inches clearance from the belt shall be provided and securely attached to the belt at points approximately four feet above and below each step tread; they shall be of the closed type; that is, the rider shall be able to grip only from the up or top side. There shall be neither step nor handhold available without a corresponding handhold or step.

Section Eleven. No person other than an employee or person properly authorized shall be permitted to ride on a manlift at any time.

(a) Tools or materials shall not be carried by any person on a manlift except small tools or materials when the same are inserted in pockets or so secured to the person or clothing as to prevent their falling.

Section Twelve. Conspicuous painted or printed signs containing instructions for the use of manlifts shall be posted at each landing, and conspicuous warning signs or signals shall be provided at points just before reaching the top and bottom landings, such signs under 12" x 20" shall be framed and under glass, and sufficient lighting shall be provided at all up and down landings.

Section Thirteen. All machinery, equipment and parts including step treads and handholds and protective facilities of every manlift shall be inspected as to their safety at least once every thirty days by a competent person designated by the employer for that purpose, and a record of such inspection shall be kept on file by the employer and made available for examination by duly authorized state or city officials.

(a) Manlifts shall be inspected once every three months by city inspectors.

Section Fourteen. All manlifts installed prior to the approval of this ordinance shall be made to conform with its requirements within a reasonable time, but in any event within eighteen months of its effective date.

(a) If the owner or operator of any manlift installed at the time of the passage of this ordinance finds himself unable to meet its requirements without extensive building changes, he shall so notify the Building Commissioner of the City of St. Louis who

shall cause a thorough inspection to be made of the building, and if in his opinion he finds that the installation of the manlift as installed provides reasonable safety, he may issue a certificate of inspection, but in no case shall an exception be made from the requirements called for as to controls.

Section Fifteen. Complete plans and specifications of every manlift to be hereafter installed, accompanied by the name and address of the manufacturer and a statement of the character and purpose of the building or structure in which the manlift is to be installed, shall be submitted to the Building Commissioner of the City of St. Louis for approval before it is installed.

shall violate any of the provisions of this ordinance shall be deemed guilty of a misdemeanor; and upon conviction thereof shall be fined not less than Five Dollars nor more than Five Hundred Dollars.

TO PUBLICIZE PATENTS

Commencing immediately the U. S. Patent Office puts into operation a new service to industry and inventors in bringing to the attention of the nation patented inventions under which the owners are willing to grant licenses or sell on reasonable terms. Thus it is hoped that such information will lead to greater employment opportunities in the reconversion period, as well as to permit industry to



Official U. S. Coast Guard Photo

AS AMERICANS SURGED ACROSS OKINAWA FARM PLOTS

Yankee infantrymen, pressing inland from the easy Okinawa beachhead, found a countryside far different from the tropical terrain of the South Pacific and the black, ashy barrenness of Iwo Jima. Only 325 miles from Japan, Okinawa has the vegetation of temperate climates. Scrubby fir trees, suggestive of parts of America, dot the farm lands. A Coast Guard photographer, going in from the beach, made this shot of troops advancing. In the distance, smoke rises from the hills, where big guns of the battlewagons found their marks. **BUY AND HOLD MORE VICTORY BONDS! BRING THE BOYS BACK HOME; CARE FOR THE INJURED.**

Section Sixteen. The fees for inspection of manlifts shall be at the rate of fifty cents for each floor, the minimum fee to be One Dollar and Fifty Cents and the maximum fee to be Two Dollars and Fifty Cents. The certificate of inspection shall be framed and under glass and firmly hung near the manlift on the first or main floor.

Section Seventeen. Sections 4567, . . . shall apply to manlifts which are elsewhere in this ordinance defined as elevator type devices.

Section Eighteen. Any person who

become acquainted with what is being done in various fields.

To accomplish the purpose a Register of Patents Available for Licensing is now being established, and will be maintained in the Patent Office available to the public for inspection in Washington, D. C. Lists of such patents will be published in the Official Gazette of the Patent Office. It is hoped that trade papers such as "GRAIN" will be able from time to time to publish selected lists applicable to your field.—J. A. Brearley, Chief Clerk.

It's The First Few

Minutes That Count Most

In Fighting A Plant Fire

The speed with which an employee uses an extinguisher to attack an incipient fire often makes the difference between an incident and a disaster. Therefore fire protection authorities recommend that periodic fire extinguisher demonstrations be held to teach plant personnel the simple but important rules for operating extinguishers. If demonstrations are too difficult to arrange, this information can be conveyed by means of wall posters, SOGES programs or oral instructions by foremen.

Below are step-by-step directions for operating the different kinds of approved hand extinguishers:

SODA-ACID and **FOAM** extinguishers are usually hung on wall hangers or set on brackets or shelves. Take the hose between the thumb and

index finger of the right hand and grasp the ring-top handle. Then with the left hand lift the extinguisher off the hook and lower it, keeping the extinguisher in an upright position. Carry the extinguisher to the fire by means of the ring top handle held in the right hand, still maintaining a hold on the hose nozzle.

To set the extinguisher in operation, grasp the bottom handle with the left hand and turn the extinguisher upside down. Release the ring top handle, but continue holding the hose in the right hand to direct the stream.

GAS CARTRIDGE and **LOADED STREAM** extinguishers closely resemble soda-acid and foam types and are operated in much the same way. When these types are inverted, they

must be bumped on the ground to rupture the carbon dioxide cartridge that supplies the pressure to expel the stream.

VAPORIZING LIQUID extinguishers of the pump-gun type generally are suspended in wall brackets. Removing the extinguisher by grasping the handle in the right hand and pulling outward. Hold the nozzle end in the left hand with the index and middle finger straddling the nozzle tip. On the way to the fire, twist the handle to unlock it and, if the device is of the air pump type, move the index finger over the nozzle tip and pump up pressure. To expel the stream, move the index finger back and pump steadily and vigorously with the right hand.

Larger sizes are sometimes provided for special use. They are carried to the fire by the handle at the top and operated by hand pump or by stored pressure. To operate the pump type, rest it on the floor, and pump with the left hand while aiming the hose stream with the right. The stored pressure type is operated by opening the valve provided on the head castings, while the right hand holds the hose nozzle.

CARBON DIOXIDE extinguishers



Easy To Make Moisture Tests with a **Steinlite**

Almost anyone can learn to operate the Steinlite in a short time. No special education or training necessary. About all one does is (1) weigh out a sample, (2) pour it into the Steinlite hopper, (3) read a meter dial, and (4) compare the reading with a chart showing percentage of moisture.

The Steinlite is **ACCURATE** . . . calibrated against official oven methods. When

used by an experienced operator it is "The one minute moisture tester". More in use than all other electric moisture testers com-

bined. Sold on 10-day free trial basis. No money down. \$275.00 F.O.B. Atchison, Kansas.

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SEEDBURO
EQUIPMENT COMPANY

SEEDING QUALITY
NORMALLY SEED TRADE
REPORTING BUREAU
FOUNDED 1912

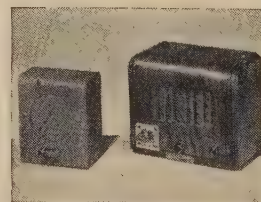
GIBBONS BAG HOLDER

No. 470—The Gibbons Bag Holder can be installed on a platform scale or on the floor. Its distinguishing feature is that both hands are free to attach and remove the bag. Equipped with foot release. Adjustable for any width and height bag. All castings are aluminum for lightness. Particularly useful when installed on a platform scale to use in connection with bagging operations. \$20.00 F.O.B. Waukegan, Illinois.



CALL-A-PHONE

The Call-A-Phone brings every man in your plant within talking distance. You can contact one or up to five persons while they remain at their work. Personnel can contact you. It is easy to install and economical to operate. Master station, \$34.00. Sub-stations, each \$12.50. Special control permits adjustment of volume. Begin with one sub-station, add others as needed.



DUPOR RESPIRATOR

The No. 66 Dupor Respirator provides economical low cost protection where dust hazards prevail. Has two large felt filter pads 5/16 inch thick, securing double capacity and clear entrance aperture of 7 1/2 square inches. Made of soft, high grade rubber and weighs only 4 ounces. Price, each \$1.65. Many other types of respirators available. Write for information.



are carried to the fire with the left hand, by the handle provided for the purpose. To operate, rest the extinguisher on the ground, pull the locking pin out, take the horn-like nozzle in the right hand, and turn the valve counter-clockwise with the left to release the gas.

PUMP TANK extinguishers are carried to the fire by means of the top handle. The pump is operated by the left hand, while the right hand aims the hose stream.

REMEMBER: The first few minutes of a fire and what is done then usually determines the seriousness thereof. An alert, well-trained crew can safely extinguish most blazes.

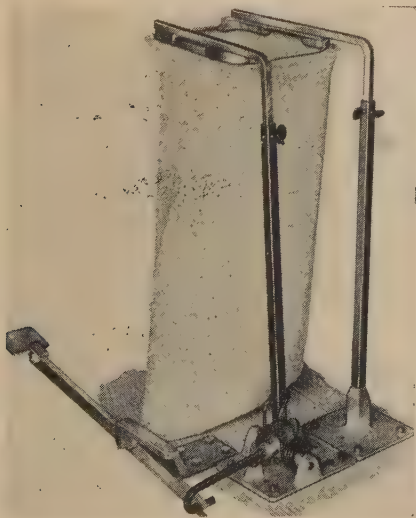
FIRE PREVENTION WEEK

October 7-13 has been officially set aside for Fire Prevention Week. This year the slogan will be: "In Peace as in war—defeat FIRE."

NEW BAG-HOLDER ANNOUNCED

Bagging operations on a platform scale can be greatly simplified by the installation of the Gibbons Bag Holder, Parke Burrows of Seedburo Equipment Co., Chicago 6, points out. So many terminal and sub-terminal plants that heretofore handled only bulk grain had to go into bagging that many will continue sacking for those customers that so specify.

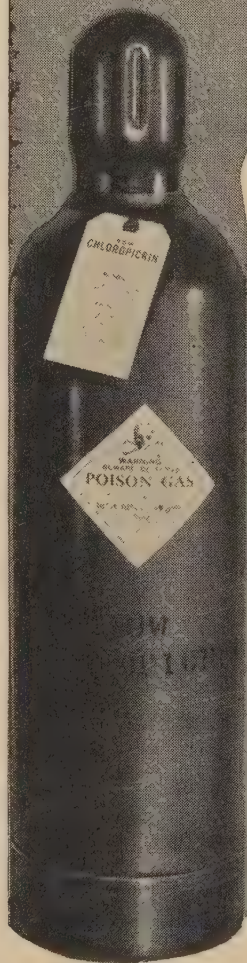
When the Gibbons Bag Holder is mounted on a platform scale it saves much time in handling, particularly inasmuch as both hands are left free. The bag is filled and weighed, then removed from the scale, thus saving lifting as well as loss of time. This new unit permits filled bags to be removed from either side, or from the



front. It also has adjustments for different bag lengths and widths. For the sake of lightness all castings are aluminum.

FOR BEST RESULTS USE

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FUMIGATION
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TO INDUSTRY AND VICTORY

A-D-M BUYS BIG PLANT

The Twin City "A" terminal and the Dickinson feed plant in Minneapolis were just acquired by the Archer-Daniels-Midland Co. The 2,088,000 bu. elevator adjoins the feed plant, which has been under lease by the buyers since 1938.

Raymond Ivey, president and general manager of the Twin City Trading Co., Clarence C. Bach, superintendent, and the entire organization will continue with the purchasers.

Further in line with its program of expansion is its live stock feed production, A-D-M will enlarge and improve this unit to produce 600 tons daily.

NORTHERN OATS PLANT SOLD

The Northern Oats Co.'s properties in Minneapolis have just been acquired by General Mills, Inc. The purchase included an 800 bbl. a day mill for processing and packaging rolled oats, a 300,000 elevator, and a number of warehouses. The plant's operations will become a part of the Purity Oats Division of General Mills, which at present operates the company's other oat plant at Keokuk, Iowa, from where divisional offices will be transferred, according to Clarence M. Hidding, president in charge. The plant's 120 employees will be retained.

NO AUTHORIZATION TO BUILD

Construction of food processing plants, grain elevators (but not re-

tail establishments) may henceforth proceed without authorization, WPB announces.

RAILROADS MOP UP BEHIND WHEAT HARVEST

For 20 consecutive weeks out of the last 21 (July 7 is the exception), carloadings of grain and grain products have each week surpassed those of the corresponding week the year before, and the trend is seemingly continuing, as reflected by the following reports:

	1945	1944	1943
July 21	68,552	59,723	58,839
July 28	67,849	57,408	58,553
Aug. 4	63,651	52,299	57,862
Aug. 11	63,481	51,206	57,398

Export Grain Up 292%

Export grain unloaded at tidewater during July totaled 15,622 cars, compared with 3,985 the year previous, or an increase of 292%.

BOXCAR SUPPLY TO IMPROVE

Reduction in shipment of war commodities should be reflected almost immediately in greater availability of freight cars. It may be a month or more before this trend is clearly apparent, but it certainly should serve to prevent a boxcar crisis in October and November, which are usually the months of heaviest carloadings. On the other hand, millers must remember that a large proportion of freight cars are not in good order and that many of the poorer cars will be withdrawn from use by the carriers at no distant date.—Millers' National Federation.

BIG YEAR AT LAKEHEAD

The largest shipments of wheat since 1928 moved from Fort William-Port Arthur during the crop year ending July 31. Over 485 million moved compared with 386 million then. Canada's exportable wheat surplus is placed at 357,250,000 bu. Mexico is expected to take large quantities of Canadian wheat and flour commencing very soon.

DULUTH RECEIPTS HIGHEST

A 20-year high record of 198,921,000 bu. was established at Duluth-Superior during the 1944-45 crop year, says Walter Teppen of the Occident Terminal Division of Russell-Miller Milling Co., Duluth. This figure came within 1,139,000 bu. of equaling the 1924-23 all-time record.

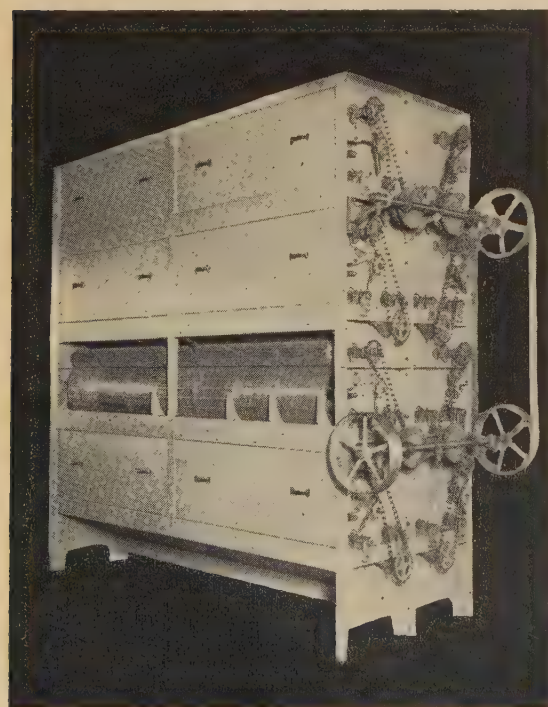
While lake movement has been somewhat constrained by the storage shortage at eastern ports, as well as the bottoms available, nevertheless an average of 17,750,000 bu. has moved on the average during May, June and July. We have been shipping out of this port during this period at the rate of 22,600,000 bu. a month, and receiving about 23,000,000 bu. Last year Duluth-Superior shipped 185,278,000 bu., he reports.

MOVEMENT OKAY SAYS USDA

Plans prepared long before harvest time for moving and storing the record 1945 wheat crop are working successfully and indications now are that the entire crop will move without serious delay or storage loss, the USDA reports. A survey made before the harvest started showed where storage shortages were likely to be and large quantities of wheat were moved from many elevators to provide space for the new crop, the report continues. Shuttle service between producing areas and major terminal markets and storage points was established when the harvest started.

INSTALLING FOUR DRIERS

Driers of 1,000 bu. hourly capacity are being installed in F. H. Peavey & Co.'s "Peavey" elevator in Duluth, in the Omaha Elevator Co. in Omaha, and in Van Dusen-Harrington Co.'s Republic and Concrete elevators in Minneapolis, according to Paul H. Christensen, General Superintendent of terminal properties. With the exception of the Duluth site, new buildings to house the driers are in the process of construction.



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VETERAN EMPLOYMENT PROBLEMS AHEAD

Many problems for employers and government alike on veteran employment and re-employment may become acute very shortly, believe most of the Supers contacted in a recent survey conducted by this publication. However probably less than 25% of the vets have re-employment rights to old jobs, although this industry will doubtless take back any and all who apply.

Most believe that employers should voluntarily accord seniority for time spent in military service to vets seeking first employment upon demobilization and that union contracts binding the hands of the employers on this score should be abrogated.

WAGE AND SALARY STABILIZATION CONTROLS RELAXED

Wage stabilization controls which will permit voluntary wage increases without the necessity of approval by WLB are relaxed upon the condition that they will not result in an increase in price ceilings. The same applies to salaries over \$5,000 as well as under when paid to executive and administrative employees.

Overtime Pay Rate Changes

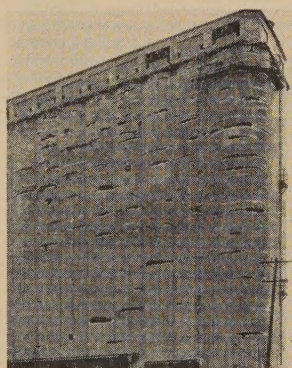
The order requiring payment of time and one-half for work on the sixth day of a work week and specified holidays, and payment of double time for the seventh consecutive day worked in a regular work week, was just revoked by executive order, effective Aug. 21.

FLASH EXPLOSION BURNS

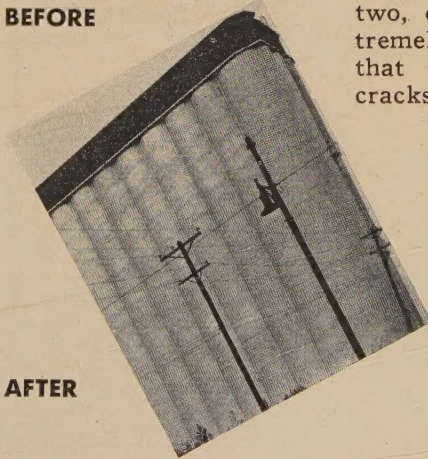
A flash dust explosion severely burned three employees of A. E. Staley Mfg. Co.'s feed house on July 12th. Shooting through a lift shaft and setting fire to a door and window on the fifth floor, little other damage was reported. The company has long been known for its vigilant house-keeping.

Wants All to Profit

I would like very much to have Mr. Sherburne, my general foreman, placed on your mailing list so that he may get the benefit from the material published in "GRAIN". I would also appreciate your furnishing copies of this magazine to Mr. Jewell, who is the General Manager of the port.—C. J. Winters, Superintendent, Public Grain Elevator, New Orleans.



BEFORE



AFTER

Experience is the best teacher. More than 35 years of *extensive* experience have taught B. J. Many engineers the most effective methods of repairing and weather-proofing elevators. *Experience*, too, has proven to elevator operators in every section of the country that a job done by B. J. Many skilled workmen is a *job well done* . . . and here are the reasons for *that*:

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Gets Ants in Pants at Soges Tourney

"Don't you ever use that expression in front of me again!" painfully exclaimed one of the golfers who participated in the Chicago SOGES Chapter's recent outing at Twin Lakes.

After a small fraction of the jubilant—if not boisterous—laughter had subsided a bit, we learned, though quite piecemeal between convulsive roars that brought tears to their eyes from laughing so hard, that one of the foursomes had driven off a tee overlooking quite a ravine. Two of

the players drove into the tall rough—and it was both. Consequently, the entire foursome joined in searching for their lost balls.

One ball was recovered. Kibitzing continued.

Lloyd Forsell had been finding balls all day, but he couldn't seem to locate this last one. The ground had all been pretty well combed. Not being pushed by other foursomes the loser of the ball tarried for a moment; suggested going on.

Just about a moment later some sharp, if not loud, expressions came from that general direction. Literally going through motions like the dancing girl tossing grapes (sour) hither and yon—only using both hands and operating at a speeded up wartime pace—said player was found upon due examination to be unburdening himself of handfuls of ants.

The foursome helped, but the ants seemed to have their supply lines pretty well organized. And not liking the intrusion of the other members of the foursome into their private little party they started sniping at their victim with a new determination.

In desperation this former golfer (he's probably in a rest home from nervous exhaustion now) took off the top of the sports outfit he wore. That did some good, to be sure, but not enough. The situation was tense and becoming more so. Where those ants didn't bite wasn't worth mentioning, we learned. In some of his craziest antics, Charley Chaplin never went through such a combination Indian war dance, rhumba, shadow boxing and somersaults.

That wasn't the worst of it. This was within 200 yards of the clubhouse where all the Supers' wives were playing cards and trying to take all of Russ Maas' and Ed Escher's money away from them. But wait! There was a thick-trunked spreading oak 200 yards away.

"Go shed your clothes," yelled Gil Lane, pointing the nook out to the frantic object of those ants' affections, who by this time was so busy extracting these black half-inch long pests from behind the seams of his trouser legs that he had no time to contemplate further strategy himself.

But, folks, sad to relate—although those who were around wouldn't agree with that touch of sentiment—this golfer lost the battle with his attackers. He never got as far as that big tree—although, happily, he didn't disgrace the august assemblage of SOGES dignitaries.

As might be expected this player's score on the remaining few holes that he was able to play before entirely blowing up somewhat resembled the national debt. Under careful handling by Bill Radke the patient was spared going to the booby-hatch (but probably not for long), however, it is not known whether that ambulance that was ordered carried the victim back on its stretcher or not—but probably so.

Anyhow, the rest of the delegation had the time of their lives on the out-

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ing, but not nearly as much fun as they had gefawing at this poor soul, who probably will never pay his SOGES dues again and never attend another meeting—at least not until the next one is called. So, folks, when you hear someone accuse you of having “ants in your pants,” just smile and chuckle to yourself, because you really haven’t got them at all. You’d sure know it if you did.

OPERATED UPON AT SEA

An appendectomy aboard an LST out on the high and rough sea is the experience recently experienced by Ward A. Combs of Presto-X-Company, Omaha, according to word from him. “These things can sure roll and toss,” he says, “but thank goodness there was a doctor aboard as a passenger, else I would have been on the spot.”

Ward enjoyed a 30-day furlough last month and wallowed in the “luxury” of filling his lungs with grain dust at the various Omaha and Council-Bluffs terminals. “Got to see most of the Supers. As you know they are sure having rough going with the present man shortage. It means longer hours and more of the general duties being done by them, but being the good men that they are they all have turned to taking it and making the best of it. So really now that the firing is over it is not only going to be the man in uniform that will be happy, but all you folks that have been keeping up the home front so well,” he writes.

HIS NAVY WORK SOON OVER

Gibson Franks, often an enthusiastic contributor to these columns with pertinent safety stories and pointed cartoons, joined the Navy’s material inspector forces upon the outbreak of hostilities. Despite his splendid background in the grain industry of approximately ten years, spent in terminal elevators, soy bean plants, and malt houses, he joined the forces, first as an inspector, then as a technical consultant, and ultimately as head of the complaint department. Thus, in addition to doing his bit, he likewise added considerable business qualifications that should prove of value to some organization once the Navy staff is reduced again to pre-war status. Inasmuch as releases may now be secured from the war agencies, those interested in contacting “Gib” may reach him at 6709 Merrill Ave., Chicago 49.

The praises of others may be of use in teaching us, not what we are, but what we ought to be.—Hare.

LIKES THE WEATHER HERE

Enjoying Chicago’s comfortable weather when most of the country was sweltering recently were Bob Hunt of Tacoma, Wash.; John Andrews, Northland Machinery & Supply Co., Fort William; Ed Frauenheim, Meyer Malt & Grain Corp., Buffalo; Orland Lehnus, General Foods Corp., Kankakee; Wayne Loveland, Hydrozo Products Co., Madison; John Goetzinger, Rosenbaum Brothers, Omaha, and Frank Blodgett, Weevil-Cide Co., Kansas City.

COLUMBUS INVITES SOGES

An invitation to hold the next (or some future) SOGES convention in Columbus, Ohio, is reported by Herbert C. Brand, Quaker Oats Co., Cedar Rapids, SOGES president. “It is my recollection,” he says, however, “that the last convention voted to go to Buffalo, Fort William or Kansas City next time.”

CORN GRIND STEADY

Corn ground for domestic consumption by 11 refiners during July totaled 9,544,024 bu., compared with 9,484,768 during June and 8,963,461 a year ago.

RENNER SUCCEEDS FRIEL

A. C. Renner, formerly General Superintendent or Norris Grain Co., Kansas City, has succeeded Bernard E. Friel as Super of the Mid-Continent Grain Co.’s terminal there. Mr. Friel, who is Secretary of the K.C. SOGES Chapter, took an extended vacation in Minneapolis, and has not announced his plans for the future to date.

Presented Well, He Thinks

I was very much pleased to find in a recent issue the article regarding alcohol from grain surpluses, and want to compliment you on the manner in which this was gotten up. Apparently you have used the talk I made in Colorado, in addition to the one made in Omaha, and combined the two—and you have done a fine job of it and have it in very understandable form.—J. L. “Roy” Welsh, President, Butler-Welsh Grain Co., Omaha; President, Grain & Feed Dealers National Ass’n.

One-fourth of all pedestrians killed in urban accidents were crossing at an unsignalized intersection—but one-third were killed crossing between intersections.



Official U. S. Coast Guard Photo

WOUNDED MARINES EVACUATED BY AIR FROM IWO JIMA

Awaiting evacuation from conquered Iwo Jima, a group of wounded Marines are snapped by a Coast Guard photographer lying in the shade of the giant wing of a Yank C-47. The big plane is on the runway of Iwo Jima’s Motoyama Airfield, wrested from the Japs in furious fighting and a vital link in America’s successful air attacks against Japan. BUY AND HOLD MORE VICTORY BONDS. BRING THE BOYS BACK HOME; CARE FOR THE INJURED.



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